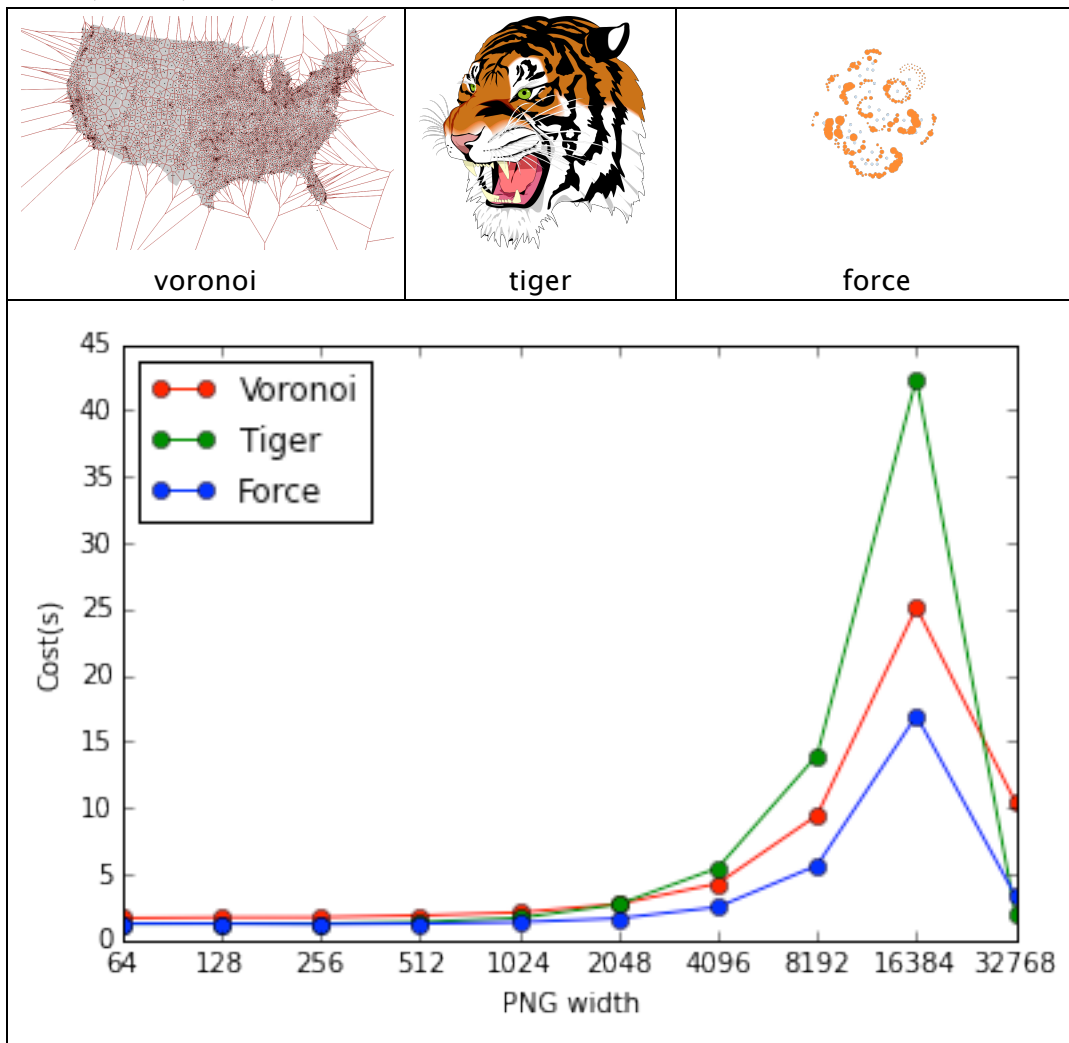


## Weekly Report (2015.7.20~7.26)

### Done

- 1) Finish revising the paper “BN-Mapping”.
- 2) Learn the basis of Spark. Get the basic concept of how spark works and how to write a spark job with python.
- 3) For the topic of “accelerating high-resolution .svg rendering based on spark”, I did a simple experiment by rasterizing .svg in different resolutions. Basically, I rasterized 3 different .svg file in the resolution of 64, 128, 256, 512, 1024, 2048, 4096, 8192, 16384, 32768. Here is the results:



With width ranges from 64 to 16384, the cost of rasterization expands exponentially, while with the width of 32768, the program fails to rasterize with a limited memory.

For our “large screen” project, the setup will be 11\*3 screens, with the resolution of 1920\*1080 for each. So the whole resolution will be 21,120 \* 3240. So, it will take tens of seconds to render a .svg file with a single machine. As a result, it will be meaningful to parallelize this kind of task.

But for this kind of task, spark may not be a must. So, I think I need to list several possible solutions first, which would be the next step.

**To Do**

- 1) Search for the possible solutions for the “high-resolution rasterization of .svg” problem.
- 2) Work on the “Software Design Report” of the large-graph project cooperated with HUAWEI.